

**IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS
GALVESTON DIVISION**

CRYSTAPHASE PRODUCTS, § **CIVIL ACTION NO. _____**
INC., §
Plaintiff, §
§
v. §
§
CRITERION CATALYSTS & §
TECHNOLOGIES, LP, CRITERION §
CATALYST COMPANY, SHELL §
GROUP and SHELL §
GLOBAL SOLUTIONS, INC., §
Defendants. § **JURY DEMANDED**

organized and existing under the laws of Delaware with its principal place of business at 910 Louisiana Street, 29th Floor, Houston, Texas 77002. Criterion Catalysts & Technologies LP may be served by serving its registered agent for service of process, CT Corporation System, 1999 Bryan Street, Suite 900, Dallas, Texas 75201-3136.

4. Defendant Criterion Catalyst Company is a corporation organized and existing under the laws of Delaware that is believed to be the predecessor entity to Criterion Catalyst and Technologies, LLC, which has its principal place of business at 910 Louisiana Street, 29th Floor, Houston, Texas 77002. Criterion Catalyst Company may be served by serving its registered agent for service of process, CT Corporation System, 1999 Bryan Street, Suite 900, Dallas, Texas 75201-3136.

5. Defendants Criterion Catalysts & Technologies, LP and Criterion Catalyst Company are collectively referred to herein as “Criterion.”

6. Defendant Shell Global Solutions, Inc. is a Delaware corporation based in Houston, Texas with a principal place of business at 3333 Highway 6 South, Houston, Texas 77082. Shell Global Solutions, Inc. may be served by serving its registered agent for service of process, CT Corporation System, 1999 Bryan Street, Suite 900, Dallas, Texas 75201-3136.

7. Defendant Shell Group is an unincorporated association and/or group doing business under an assumed name and may be sued in its assumed name or common name for purposes of enforcing a substantive right against it. Shell Group has a principal place of business at 3333 Highway 6 South, Houston, Texas 77082 and may be served by serving its registered agent for service of process, CT Corporation System, 1999 Bryan Street, Suite 900, Dallas, Texas 75201-3136.

8. Defendants Shell Global Solutions, Inc. and Shell Group are collectively referred

to herein as “Shell.”

9. Criterion is a member of Shell’s affiliated catalyst team and a wholly owned subsidiary of CRI/Criterion, Inc., which is the global catalyst company of the Shell Group.

Jurisdiction and Venue

10. This action arises under the patent laws of the United States, 35 U.S.C. § 1 *et seq.* generally, and 35 U.S.C. §§ 271(a), 271(b), and 271(c) specifically.

11. This Court has subject matter jurisdiction over the action under 28 U.S.C. §§ 1331 and 1338(a).

12. This Court has personal jurisdiction over each Defendant.

13. Venue is proper in this judicial district under 28 U.S.C. §1400(b).

Basic Background

14. Typical chemical reactor vessels include discrete solid catalyst particles contained in one or more fixed beds. Often these beds are supported, or retained, within the reactor vessel by filtering layers formed of discrete units that are usually packed into the vessel at the top and bottom. The units are made from materials that are inert to the reaction but which allow a feed stream to enter the vessel, and a product stream to exit. These filtering units may trap all or some solid contaminants such as dirt, iron oxide, iron sulfide, asphaltenes, coke fines, catalyst fines, sediments, or other entrained foreign particulate material in the reactor feed stream. The trapping of the contaminants is to prevent undesirable material from plugging, poisoning, or otherwise interfering with the optimal workings of a reaction vessel. The interference of the optimal workings of the reactor vessel by these contaminants is sometimes referred to as fouling. Additionally, these inert filtering layers may facilitate the flow of the feed stream across the catalyst bed in such a manner as to equally distribute the feed stream and reduce channeling

through the catalyst in the reaction vessel.

15. The fouling challenge is complex, and the specific design of a top-bed filtering unit (where the feed stream enters the top of the reaction vessel) can have a substantial impact on the proper operation of a chemical reactor and on the operating costs associated with a given reactor. As noted by Shell, optimized fouling abatement solutions can unlock millions of dollars a year for a given reactor and fouling abatement is often viewed as the “first step” to unlocking maximum value from a chemical reactor. *See* Shell Global publication, “How Fouling Abatement Solutions Can Unlock Millions of Dollars Per Year From Your Reactor” (copy attached as Exhibit A) (hereinafter “Shell’s Fouling Abatement Publication”).

16. In 1997 Crystaphase developed a novel ceramic filtering unit and method of using the same in a chemical reactor for filtering and trapping contaminants and for fluid distribution.

17. Around that same time, Criterion (through one of its affiliated companies - Criterion Catalyst Company LP) and Crystaphase entered into a working relationship wherein Crystaphase Products disclosed to Criterion – in confidence – details concerning Crystaphase’s novel filtering unit and method of using the same. Specifically, in an agreement signed in October 1997, Defendant Criterion and Crystaphase entered into an agreement under which it was agreed that, during the term of the Agreement, Crystaphase could disclose to Criterion agreed-upon “confidential information and inventions” relating to filtration and flow distributions for chemical reactors. In that agreement, Criterion further agreed “not to disclose confidential information or inventions relating to the SUBJECT to third parties, nor to use confidential information or inventions relating to the SUBJECT for itself or others”, except for certain limited permitted uses.

18. After developing its novel filtering unit and method of using the same,

Crystaphase began the process of obtaining patent protection for its novel filtering unit and method of using the same through, among other things, filing Provisional U.S. Patent Application No. 60/087,235 on May 29, 1998.

19. As a result of the working relationship and Criterion's strong interest in the novel filtering units and method for using the same developed by Crystaphase, Crystaphase and Criterion entered into an arrangement under which Crystaphase would sell its novel filtering units exclusively to Criterion for Criterion to use, and have its customers use in accordance with the novel method of use developed by Crystaphase.

20. During the course of their working arrangement, Criterion informed Crystaphase that Criterion had filed and was seeking patent protection for its novel filtering unit and method of using the same. As a result, Criterion was aware of that Crystaphase was seeking patent protection covering its novel filtering unit and the method of using the same.

21. During the course of the Criterion and Crystaphase relationship, Criterion specifically requested that the phrase "patent pending" (or any equivalent phrase) not be included on the packaging materials related to Crystaphase's novel filtering units sold for use in Crystaphase's novel method of use.

22. In late 2002 Criterion stopped purchasing Crystaphase's novel filtering unit from Crystaphase. As a result of this situation, Crystaphase understood that Criterion would no longer be offering the novel filtering unit for sale for use in the novel method of use developed by Crystaphase.

Issuance of the Patents-In-Suit

23. On November 22, 2011, the '521 Patent, titled "Filtering Medium and Method For Contacting Solids Containing Feeds For Chemical Reactors" was duly issued by the United

States Patent and Trademark Office. Crystaphase is the owner of all right, title, and interest in the ‘521 Patent. A copy of the ‘521 Patent is attached as Exhibit B and is hereby incorporated by reference.

24. On August 11, 2015, the ‘863 Patent, titled “Filtering Medium and Method For Contacting Solids Containing Feeds For Chemical Reactors” was duly issued by the United States Patent and Trademark Office. The ‘863 Patent is a continuation of the ‘521 Patent. Crystaphase is the owner of all right, title, and interest in the ‘863 Patent. A copy of the ‘863 Patent is attached as Exhibit C and is hereby incorporated by reference.

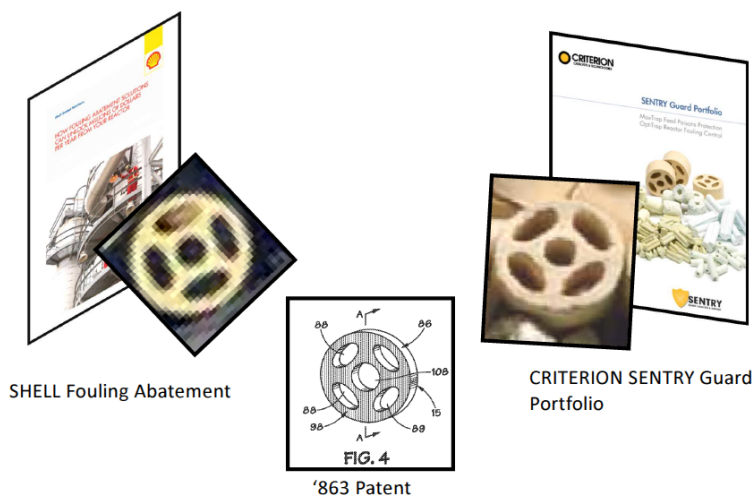
25. Defendants have come to be aware of the issuance of Crystaphase’s ‘521 and ‘863 Patents and have knowledge of both patents at least as early as the date they became aware of this Complaint.

Criterion’s Copying

26. Unbeknownst to Crystaphase, in 2002 Criterion did not cease selling and offering for sale the novel filtering units developed by Crystaphase for use in the method developed by Crystaphase Products. Instead, Criterion developed ceramic filtering units substantially identical to the filtering units disclosed – in confidence – by Crystaphase to Criterion and that Criterion had purchased from Crystaphase for years, and began offering such copied units for sale and use in the methods recited in the claims of the ‘863 and ‘521 Patents and selling such ceramic units for such use.

27. One of the filtering units created by Criterion – specifically, Criterion’s OptiTrap (Medallion) Ceramic Filtering Unit also known at times as the 855MD unit – is a substantial copy of a filtering unit disclosed in confidence by Crystaphase to Criterion, sold by Crystaphase to Criterion, and reflected in the disclosures of the ‘863 and ‘521 Patents.

28. Criterion's OptiTrap (Medallion) ceramic filter unit is identical in all material respect to the ceramic filter unit depicted in FIG. 4 of the '863 and '521 Patents. This is reflected by the images below which depict, in the center, FIG. 4 of the '521 and '863 Patents and, on the left, Criterion's OptiTrap (Medallion) as depicted in Shell's Fouling Abatement Publication and, on the right, Criterion's OptiTrap (Medallion) as depicted in Criterion's SENTRY Guard Portfolio publication (copy attached as Exhibit D):

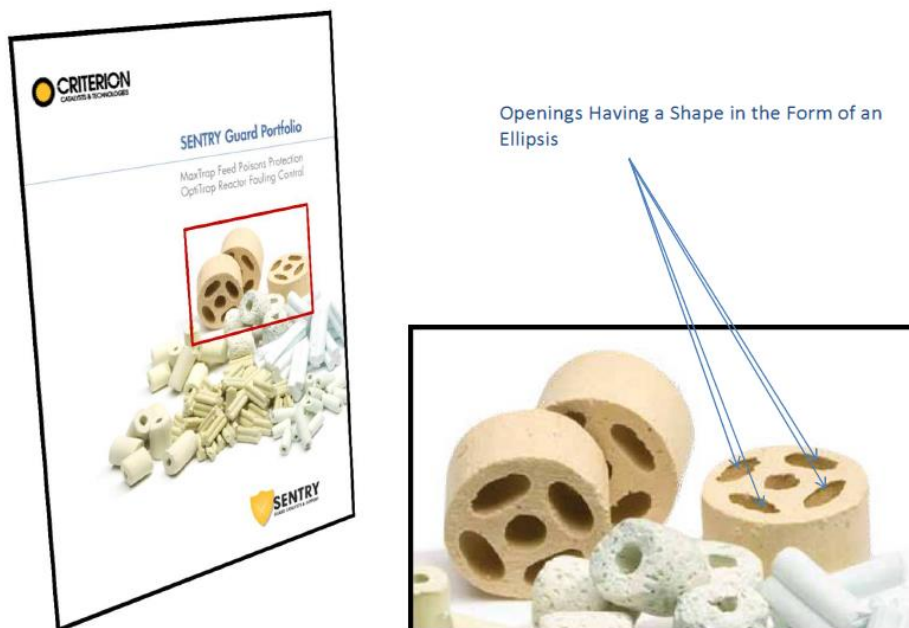


29. Additionally, Criterion's OptiTrap (Medallion) ceramic filter unit meets all of the limitations in claim 1 of the '863 Patent relating the structure of a ceramic filter unit. Specifically, as reflected in the highlighted images below:

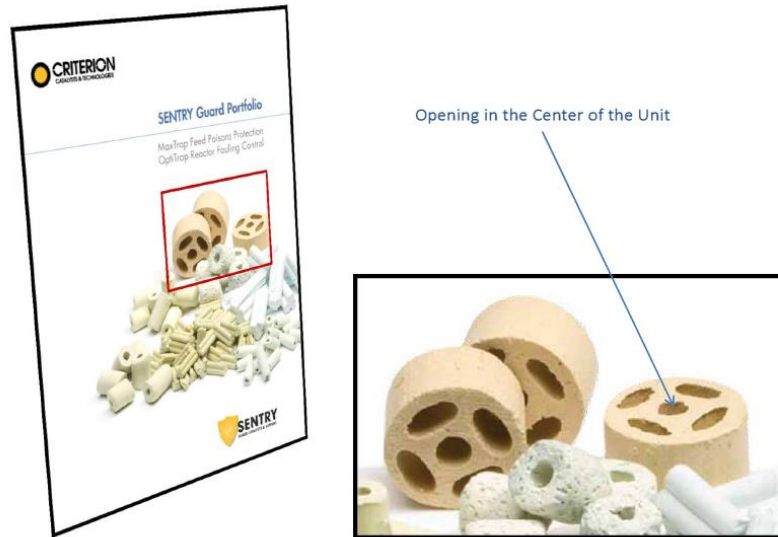
29.1. Criterion's OptiTrap (Medallion) ceramic filter unit has at least three, specifically five, openings extending there through which define a plurality of flow passageways extending through the unit.



29.2. At least some of the three openings in Criterion's OptiTrap (Medallion) ceramic filter units have a shape in the form of an ellipsis.

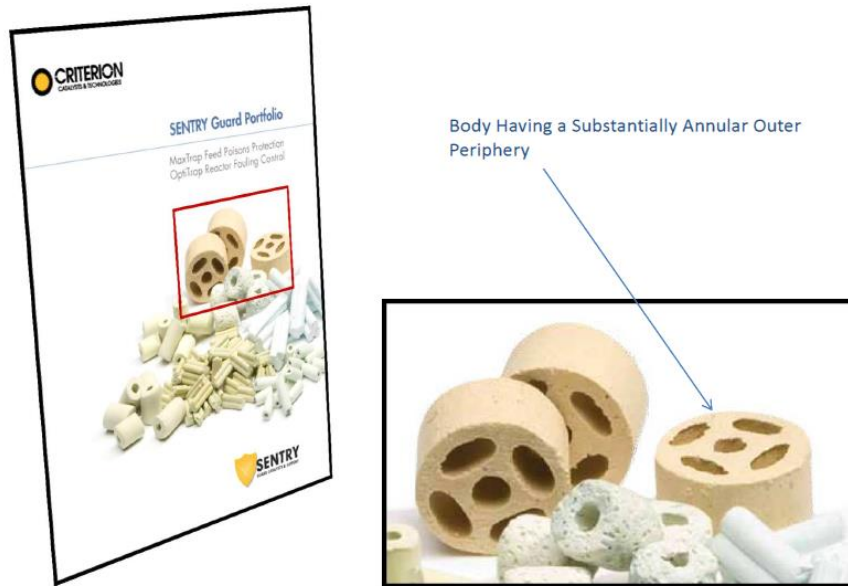


29.3. One of the openings in Criterion's OptiTrap (Medallion) ceramic filter units is in the center of the unit.



30. Criterion's OptiTrap (Medallion) ceramic filter unit meets all of the limitations in claim 1 of the '521 Patent relating the structure of a ceramic filter unit. Specifically, as reflected in the imaged below:

30.1. Criterion's OptiTrap (Medallion) ceramic filter unit includes a body having a substantially annular outer peripheral shape.



30.2. Criterion's OptiTrap (Medallion) ceramic filter unit includes a body defining a central opening and at least three elliptical openings extending through the body so that a combination of the central opening and the three elliptical openings define a plurality of flow passageways extending through the unit.

31. Criterion's OptiTrap (Medallion) ceramic filter unit meets all of the limitations in claim 7 of the '521 Patent relating to the structure of a ceramic filter unit. Specifically, as reflected in the image below, Criterion's OptiTrap (Medallion) ceramic filter unit includes a body that defines a central opening extending through the body and at least three elliptical openings extending through the body that substantially surround the central opening between the central opening and the outer periphery of the body to define a ring around the central opening.



32. Criterion's OptiTrap (Medallion) ceramic filter unit meets all of the limitations in claim 18 of the '521 Patent relating to the structure of a ceramic filter unit. Specifically, Criterion's OptiTrap (Medallion) ceramic filter unit includes a body that defines a central opening extending through the body and at least three elliptical openings extending through the body and positioned between the central opening and an outer periphery of the unit so that a combination of the central opening and the elliptical openings define a plurality of flow passageways extending through the unit.

33. Criterion's OptiTrap (Medallion) ceramic filter unit meets all of the limitations set forth in claims 19 and 21 of the '521 Patent relating the structure of a ceramic filter unit. Specifically, Criterion's OptiTrap (Medallion) ceramic filter unit includes a body that defines a central circular opening extending through the body and at least three non-circular elliptical openings extending through the body.



34. Criterion's OptiTrap (Medallion) ceramic filter unit meets all of the limitations in claim 34 of the '521 Patent relating the structure of a ceramic filter unit. Specifically, as reflected in the image below, Criterion's OptiTrap (Medallion) ceramic filter unit includes a body having a substantially circular outer peripheral shape that defines at least three elliptical openings extending through the body and positioned between a medial portion of the unit and an outer periphery of the unit to define a plurality of flow passageways extending through the unit.



35. When arranged to form a top bed grading layer in a chemical reactor, Criterion's OptiTrap (Medallion) ceramic filter units define a plurality of flow passageways extending

through at least some of the units forming the layer.

36. As offered for sale and sold by Defendants' Criterion's OptiTrap (Medallion) ceramic filter units are used as components of a larger overall assembly and, with such other components constitute a functional unit. As one example, as offered for sale and sold by Defendants' Criterion's OptiTrap (Medallion) ceramic filter units, are commonly sold along with other grading materials, poison abatement elements, catalysts, trays and rings for use as a functioning unit providing stream distribution and other functionality.

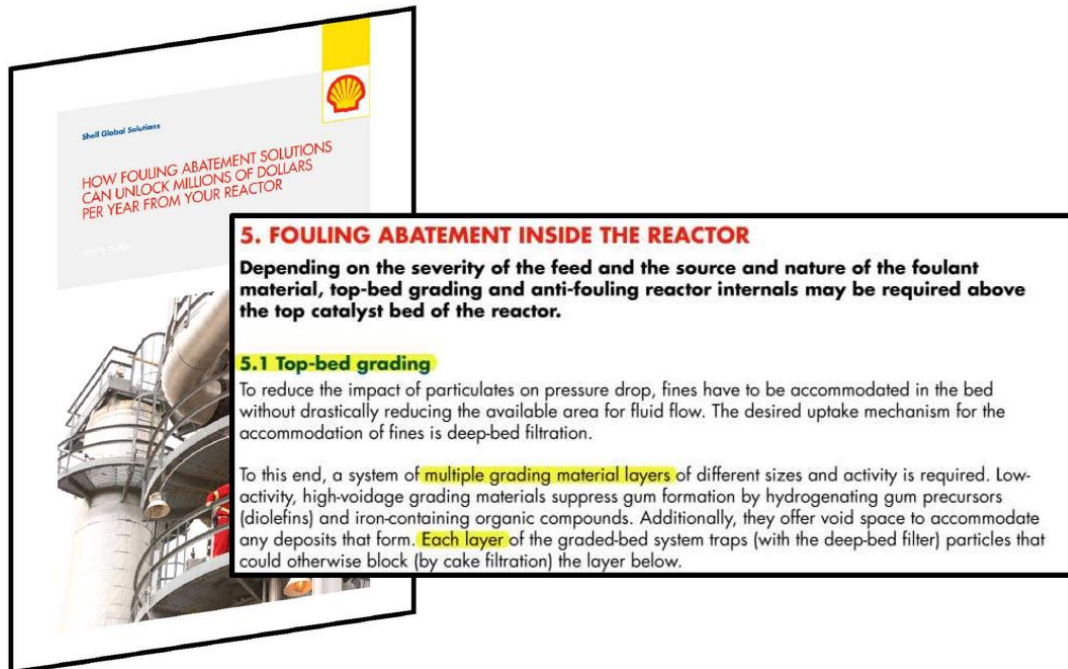
DEFENDANTS' PATENT INFRINGEMENT

37. Both Criterion and Shell have used Criterion's copied filtering units – including but not necessarily limited to the Criterion's OptiTrap (Medallion) ceramic filter unit – in accordance with a method wherein:

- 37.1. a layer of such units is provided inside a chemical reactor;
- 37.2. an organic-based feed stream is contacted with the layer;
- 37.3. the feed stream is subdivided into a plurality of smaller streams as it passes through the openings in the units forming the layer;
- 37.4. the plurality of smaller streams are uniformly spread across the layer as they pass through the units;
- 37.5. contaminants are removed from the feed stream; and
- 37.6. the decontaminated feed stream is provided to a catalyst bed for further processing in the chemical reactor.

38. For example, and without limitation, Shell's Fouling Abatement Publication explicitly teaches, encourages, and promotes the use of the Criterion's OptiTrap (Medallion) ceramic filter unit in accordance with the method described in the previous paragraph. In

particular the identified publication (highlighted portions reproduced below) explicitly promotes the use of Criterion's OptiTrap (Medallion) ceramic filter unit as part of a top-bed grading layer to both remove and trap contaminants and to "spread out" the foulant (by spreading the feed stream as it passes through the layer).





39. As another example, defendant Criterion actively promotes the use of Criterion's OptiTrap (Medallion) ceramic filter unit in accordance with the method described above. Specifically, Criterion's SENTRY Guard Portfolio (portions reproduced below) prominently depicts Criterion's OptiTrap (Medallion) ceramic filter unit on the cover of the publication, in large color images contained therein, and explicitly promotes the use of Criterion's OptiTrap (Medallion) ceramic filter unit for selective particulate deposition.

CRITERION
CATALYSTS & TECHNOLOGIES

SENTRY Guard Portfolio

MaxTrap Feed Poison
OptiTrap Reactor Fouling

Pressure-drop protection

The SENTRY portfolio includes a wide variety of products to help you achieve deep bed filtration and selective particulate deposition. Designing deep bed filters properly requires a detailed understanding of filtration. Particulate loading sets the hydraulic channel requirement, and the void requirement also must be taken into account. Proper design requires a thorough understanding of catalyst geometry efficiency, which Criterion has acquired through years of meticulous experimentation and research.

Criterion's SENTRY OptiTrap products and services provide ability to develop casespecific protection from pressure drop in hydroprocessing. In developing an OptiTrap system, a number of mechanisms are required to maximise filtering and trapping efficiency:

- Particle admittance, affecting size of particles trapped in each section
- Void space, determining both superficial surface velocities for settling mechanisms and storage capacity of removed particles
- Hydroprocessing activity, targeted at a controlled removal of foulants such as oxygenated hydrocarbons and iron sulfides
- Interface layers, which can aid in distributing the foulant across a large effective surface area

	Size(s)	Void	Activity
OptiTrap (Medallion)	1.6 mm	65-70%	Inert
<ul style="list-style-type: none"> • Inert • High void • Flow improvement 			

market-leading customise solutions because no two are identical.

40. At a time when they had knowledge of the '521 and '863 Patents, and that the use of the same as promoted by Defendants' would infringe one or more claims in each of the '521 and '863 Patents, both Defendants have actively promoted others to use Criterion's copied filtering units – including but not necessarily limited to the Criterion's OptiTrap (Medallion) ceramic filter unit – in accordance with the method set forth previously. Such promotion has resulted in the unauthorized practice of the claimed subject matter and direct infringement of the '521 and '863 Patents by Defendants' customers.

41. At a time when they had knowledge of the '521 and '863 Patents, both Defendants have sold and offered for sale Criterion's copied filtering units – including but not necessarily limited to the Criterion's OptiTrap (Medallion) ceramic filter unit — for use in the method set forth in Paragraph 37.

Count 1

(Defendants' Direct Infringement of the '521 Patent)

42. Crystaphase incorporates by reference the allegations in the paragraphs above as if set forth herein.

43. Both Criterion and Shell have used Criterion's OptiTrap (Medallion) ceramic filter unit in a method of fluid distribution in a chemical reactor that directly infringes the '521 Patent including, but not necessarily limited to, claims 1, 2, 7, 18, 19, 21, and 34.

44. Because of their knowledge of the '521 Patent, Defendants' infringement is and has been willful.

45. Defendants' acts of direct infringement of the '521 Patent have caused, and continue to cause, damage to Crystaphase, and Crystaphase is entitled to recover damages.

46. Defendants' acts of direct infringement of the '521 Patent have caused, and will continue to cause, damage to Crystaphase's business, causing irreparable harm for which there is no adequate remedy at law. As such, Crystaphase is entitled to injunctive relief.

Count 2

(Defendants' Induced Infringement of the '521 Patent)

47. Crystaphase incorporates by reference the allegations in the paragraphs above as if set forth herein.

48. Defendants promote, sell, offer for sale, counsel, encourage and intend for their customers to use Criterion's OptiTrap (Medallion) ceramic filter unit in a manner that practices the process set forth in one or more claims of each of the '521 Patent.

49. As an example, both Criterion and Shell have specifically promoted, and continue to promote, Criterion's OptiTrap (Medallion) ceramic filter unit for use in a method of fluid

distribution in a chemical reactor wherein:

- 49.1. a layer of such units is provided inside a chemical reactor;
- 49.2. an organic-based feed stream is contacted with the layer;
- 49.3. the feed stream is subdivided into a plurality of smaller streams as it passes through the openings in the units forming the layer;
- 49.4. the plurality of smaller streams are uniformly spread across the layer as they pass through the units;
- 49.5. contaminants are removed from the feed stream; and
- 49.6. the decontaminated feed stream is provided to a catalyst bed for further processing in the chemical reactor.

50. Defendants' actions in connection with the promotion of its product were done with knowledge of the '521 Patent and amounts to active inducement of patent infringement under 35 U.S.C. 271(b).

51. Because of their knowledge of the '521 Patent, Defendants' induced infringement is and has been willful.

52. Defendants' acts of induced infringement of the '521 Patent have caused, and continue to cause, damage to Crystaphase, and Crystaphase is entitled to recover damages.

53. Defendants' acts of induced infringement of the '521 Patent have caused, and will continue to cause, damage to Crystaphase's business, causing irreparable harm for which there is no adequate remedy at law. As such, Crystaphase is entitled to injunctive relief.

Count 3

(Defendants' Contributory Infringement of the '521 Patent)

54. Crystaphase Products incorporates by reference the allegations in the paragraphs above as if set forth herein.

55. Criterion's copied filtering units – including but not necessarily limited to Criterion's OptiTrap (Medallion) ceramic filter units – are not staple articles of commerce and have no substantial uses that do not infringe the '521 Patent. Among other things,

55.1. Defendants promote sell, and offer for sale, and price for sale, Criterion's OptiTrap (Medallion) ceramic filter unit exclusively for use in a method of fluid distribution in a chemical reactor to improve flow distribution for an organic feed stream and fouling tolerance. Defendants do not promote or offer for sale such ceramic units for any other purpose.

55.2. Defendants use Criterion's OptiTrap (Medallion) ceramic filter unit substantially exclusively in top bed grading applications. Defendants do not engage in substantial uses of such ceramic units for any other purpose

56. Defendants know, and have known, that Criterion's OptiTrap (Medallion) ceramic filter unit are especially made for use in an infringement of the '521 Patent.

57. Defendants have offered to sell and sold Criterion's OptiTrap (Medallion) ceramic filter unit within the United States at a time when they knew that Criterion's OptiTrap (Medallion) ceramic filter unit were especially made for use in an infringement of the '521 Patent.

58. Defendants' actions as described in this section constitute contributory infringement of the '521 Patent under 35 U.S.C. §271(c).

59. Because of their knowledge of the '521 Patent, Defendants' contributory infringement is and has been willful.

60. Defendants' acts of contributory infringement of the '521 Patent have caused, and continue to cause, damage to Crystaphase, and Crystaphase is entitled to recover damages.

61. Defendants' acts of contributory infringement of the '521 Patent have caused, and will continue to cause, damage to Crystaphase's business, causing irreparable harm for which there is no adequate remedy at law. As such, Crystaphase is entitled to injunctive relief.

Count 4

(Defendants' Direct Infringement of the '863 Patent)

62. Crystaphase incorporates by reference the allegations in the paragraphs above as if set forth herein.

63. Both Criterion and Shell have used Criterion's OptiTrap (Medallion) ceramic filter unit in a method of fluid distribution in a chemical reactor that directly infringes the '863 Patent including, but not necessarily limited to, claim 1.

64. Because of their knowledge of the '863 Patent, Defendants' infringement is and has been willful.

65. Defendants' acts of direct infringement of the '863 Patent have caused, and continue to cause, damage to Crystaphase, and Crystaphase is entitled to recover damages.

66. Defendants' acts of direct infringement of the '863 Patent have caused, and will continue to cause, damage to Crystaphase's business, causing irreparable harm for which there is no adequate remedy at law. As such, Crystaphase is entitled to injunctive relief.

Count 5

(Defendants' Induced Infringement of the '863 Patent)

67. Crystaphase incorporates by reference the allegations in the paragraphs above as if set forth herein.

68. Defendants promote, sell, offer for sale, counsel, encourage and intend for their customers to use Criterion's OptiTrap (Medallion) ceramic filter unit in a manner that practices the process set forth in one or more claims of each of the '863 Patent.

69. As an example, both Criterion and Shell have specifically promoted, and continue to promote, Criterion's OptiTrap (Medallion) ceramic filter unit for use in a method of fluid distribution in a chemical reactor wherein:

69.1. a layer of such units is provided inside a chemical reactor;

69.2. an organic-based feed stream is contacted with the layer;

69.3. the feed stream is subdivided into a plurality of smaller streams as it passes through the openings in the units forming the layer;

69.4. the plurality of smaller streams are uniformly spread across the layer as they passes through the units;

69.5. contaminants are removed from the feed stream; and

69.6. the decontaminated feed stream is provided to a catalyst bed for further processing in the chemical reactor.

70. Defendants' actions in connection with the promotion of its product were done with knowledge of the '863 Patent and amounts to active inducement of patent infringement under 35 U.S.C. 271(b).

71. Because of their knowledge of the '863 Patent, Defendants' induced infringement

is and has been willful.

72. Defendants' acts of induced infringement of the '863 Patent have caused, and continue to cause, damage to Crystaphase, and Crystaphase is entitled to recover damages.

73. Defendants' acts of induced infringement of the '863 Patent have caused, and will continue to cause, damage to Crystaphase's business, causing irreparable harm for which there is no adequate remedy at law. As such, Crystaphase is entitled to injunctive relief.

Count 6

(Defendants' Contributory Infringement of the '863 Patent)

74. Crystaphase Products incorporates by reference the allegations in the paragraphs above as if set forth herein.

75. Criterion's copied filtering units – including but not necessarily limited to Criterion's OptiTrap (Medallion) ceramic filter units – are not staple articles of commerce and have no substantial uses that do not infringe the '863 Patent.

75.1. Defendants promote sell, and offer for sale, and price for sale, Criterion's OptiTrap (Medallion) ceramic filter unit exclusively for use in a method of fluid distribution in a chemical reactor to improve flow distribution for an organic feed stream and fouling tolerance. Defendants do not promote or offer for sale such ceramic units for any other purpose.

75.2. Defendants use Criterion's OptiTrap (Medallion) ceramic filter unit substantially exclusively in top bed grading applications. Defendants do not engage in substantial uses of such ceramic units for any other purpose.

76. Defendants know, and have known, that Criterion's OptiTrap (Medallion) ceramic filter unit are especially made for use in an infringement of the '863 Patent.

77. Defendants have offered to sell and sold Criterion's OptiTrap (Medallion)

ceramic filter unit within the United States at a time when they knew that Criterion's OptiTrap (Medallion) ceramic filter unit were especially made for use in an infringement of the '863 Patent.

78. Defendants' actions as described in this section constitute contributory infringement of the '863 Patent under 35 U.S.C. §271(c).

79. Because of their knowledge of the '863 Patent, Defendants' contributory infringement is and has been willful.

80. Defendants' acts of contributory infringement of the '863 Patent have caused, and continue to cause, damage to Crystaphase, and Crystaphase is entitled to recover damages.

81. Defendants' acts of contributory infringement of the '863 Patent have caused, and will continue to cause, damage to Crystaphase's business, causing irreparable harm for which there is no adequate remedy at law. As such, Crystaphase is entitled to injunctive relief.

STATEMENT UNDER FED. R. CIV. P. 11

82. The allegations in paragraphs (including sub-paragraphs) 4, 6, 36, 37, 40, 41, 42, 44, 49-51, 56, 57, 59, 64, 69-71, 76, 77 and 79 have evidentiary support and will likely have further evidentiary support after a reasonable opportunity for further investigation and discovery.

Prayer for Relief

WHEREFORE, Crystaphase respectfully requests that this Court enter a Judgment and Order:

- a. Declaring that one or more claims of the '531 Patent have been infringed, either literally or under the doctrine of equivalents, directly and/or indirectly (though induced or contributory infringement) by each of the Defendants;
- b. Declaring that one or more claims of the '863 Patent have been infringed, either literally or under the doctrine of equivalents, directly and/or indirectly (though induced or contributory infringement) by each of the Defendants;
- c. Awarding Crystaphase damages adequate to compensate for the infringements, but in no event less than a reasonable royalty made for use of the inventions of the '521 and '863 Patents, together with interest and costs as fixed by the Court;
- d. Entering a permanent injunction against continued patent infringement as such form as the Court deems just;
- e. Declaring this case to be exceptional under the Patent Law and awarding Crystaphase Products enhanced damages under 35 U.S.C. § 284 and attorney fees and costs under 35 U.S.C. § 285 or any other applicable statute;
- f. Granting Crystaphase such that other and further relief as this Court deems just, proper, and equitable.

Respectfully submitted,

HAGANS MONTGOMERY & RUSTAY

A handwritten signature in green ink that reads "Fred Hagans". The signature is written in a cursive style and is positioned above a horizontal line.

Fred Hagans
Attorney in Charge
State Bar No. 08685500
S.D. Tex. ID No. 2457
Jennifer B. Rustay
State Bar No. 24002124
S.D. Tex ID No. 23980
3200 Travis, Fourth Floor
Houston, Texas 77006
Telephone: (713) 222-2700
Facsimile: (713) 547-4950
fhagans@hagans.law
jrustay@hagans.law

Robert J. McCaughan, Jr.
SUTTON McAUGHAN DEAYER PLLC
State Bar No. 00786096
S.D. Tex. ID No. 16501
Three Riverway, Suite 900
Houston, Texas 77056
Telephone: (713) 800-5700
Facsimile: (713) 800-5699
bmcaughan@SMD-IPLaw.com

Daniel P. Barton
THE BARTON LAW GROUP
State Bar No.: 00789774
S.D. Tex. ID No: 17748
1201 Shepherd Drive
Houston, Texas 77007
Telephone: (713) 227-4747
Facsimile: (713) 621-5900
dbarton@bartonlawgroup.com